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Research Article

Lagerstroemia yangchunensis (Lythraceae), a new species from Guangdong, China

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Abstract

A new species from southern China, *Lagerstroemia yangchunensis* B.H.Wu & G.D.Chen, **sp. nov.**, is described in the present paper. This species is morphologically similar to *L. duperreana* Pierre ex Gagnep., but can be distinguished by its coarse bark with vertical fissures, calyx lobes glabrous inside, and flowers with shorter pseudopedicels and petals with longer claws. Detailed morphological characteristics, habitat information, and comparisons with similar species are provided.

Key words: Crape myrtle, Flora, new species, Yangchun

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Introduction

Lagerstroemia L. (Lythraceae) is a significant genus known for its ornamental value, notably for its vibrant summer blooms. Taxonomic revisions of *Lagerstroemia* have been extensive, commencing with Koehne's monograph (Koehne 1883, 1903) and followed by subsequent revisions by Furtado and Srisuko (1969), which recognized 53 species. Subsequently, regional taxonomic updates (Lee and Lau 1983; Hewson 1990; Qin and Graham 2007; De Wilde and Duyfjes 2013, 2014, 2016; De Wilde et al. 2014) and additional species descriptions (Zhou et al. 2004; Gu et al. 2012, 2015; Deepu and Pandurangan 2017; Pham et al. 2017; De Wilde and Duyfjes 2019; Wu et al. 2023) have refined our understanding of the genus. Currently, the genus comprises ca. 52 species (Wu et al. 2023).

In recent years, we carried out several field surveys to gather germplasm resources of *Lagerstroemia* in China. In 2024, we found an unknown *Lagerstroemia* species with coarse and vertically fissured bark, a character uncommon in *Lagerstroemia* species of Guangdong. After extensive morphological comparisons and taxonomic analyses, we confirmed a new species which we formally describe herein.

* These authors contributed equally to this work.

Materials and methods

Morphological characteristics were analyzed based on observations of the living plants in the field and dried specimens in herbaria. Measurements were conducted manually with rulers or using Digimizer version 4.6.0 (MedCalc Software, Mariakerke, Belgium). The voucher specimens were deposited in the herbarium of South China Botanical Garden (IBSC), South China Agricultural University (CANT), Sun Yat-Sen University (SYS) and China National Botanical Garden (CNBG).

Taxonomic treatment

Lagerstroemia yangchunensis **B.H.Wu & G.D.Chen, sp. nov.**
urn:lsid:ipni.org:names:77359970-1
Fig. 1

Type. China • Guangdong: Yangchun City, Chunwan Town, Xinglong Country, in forest, on sunny slope. 22.3327°N, 112.0097°E, 205 m a.s.l., 28 Jun 2024 (fl), *B.H. Wu Lg2024142* (holotype: IBSC!; isotypes: CANT!, CNBG!, SYS!).

Diagnosis. *Lagerstroemia yangchunensis* is morphologically similar to *L. duperreana*, but distinguished by its coarse bark with vertical fissures, calyx lobes glabrous inside, and flowers with shorter pseudopedicels and petals with longer claws.

Description. Trees to 15 m tall. Bark greyish brown, thick and coarse, vertically fissured; branchlets glabrous, terete. Leaves alternate, rarely subopposite; petiole 4–8 mm long, glabrous; leaf blade papery, margin entire, elliptic-oblong, oblong, rarely obovate, 10–14 × 3.5–5 cm, base cuneate to acute, apex acute, acuminate, rarely obtuse, adaxial surface green, glabrous, abaxial surface pale green, slightly pubescent along midvein, lateral veins brochidodromous, 10–15 on each side of midvein. Inflorescences paniculate, terminal or axillary; panicles 9–22 cm long, puberulous with whitish brown hairs. Pedicels 2–5 mm long, densely whitish tomentose; flower buds densely whitish tomentose, obovoid (excluding pseudopedicels), 7–9 mm long, pseudopedicel 2–3 mm long; flowering calyx tubes (excluding pseudopedicels) cup-shaped, 6–8 mm long, outside densely whitish tomentose, distinctly 12-ridged, inside glabrous, lobes 6, triangular to slightly acuminate, 2.5–4.3 × 2–3.5 mm, reflexed, epicalyx minute, pseudopedicel 2.5–5 mm long; petals 6, crumpled, ovate to broadly ovate, 15–20 mm long including 9–10 mm long claw; stamens 30–40, dimorphic, with 6 stamens longer (21–24 mm long), thicker and the lower half reddish purple in color, the remaining stamens shorter (10–13 mm long), thinner and white in color, filaments glabrous; ovary glabrous, styles 22–30 mm long, glabrous, stigmas small. Capsules oblong, smooth, 16–19 mm long, ca. 10 mm in diameter, loculicidally dehiscent, 5-valved. Seeds 7–10 mm long including wing.

Phenology. Flowering from June to July, fruiting after July.

Distribution and habitat. *Lagerstroemia yangchunensis* is hitherto known from its type locality, Chunwan Town, Yangchun City of Guangdong; only 4 individuals were found in the population. It grows in forest on sunny slopes at ca. 200 m elevation.

Etymology. The species epithet “yangchunensis” refers to Yangchun County, the locality where this species was discovered.

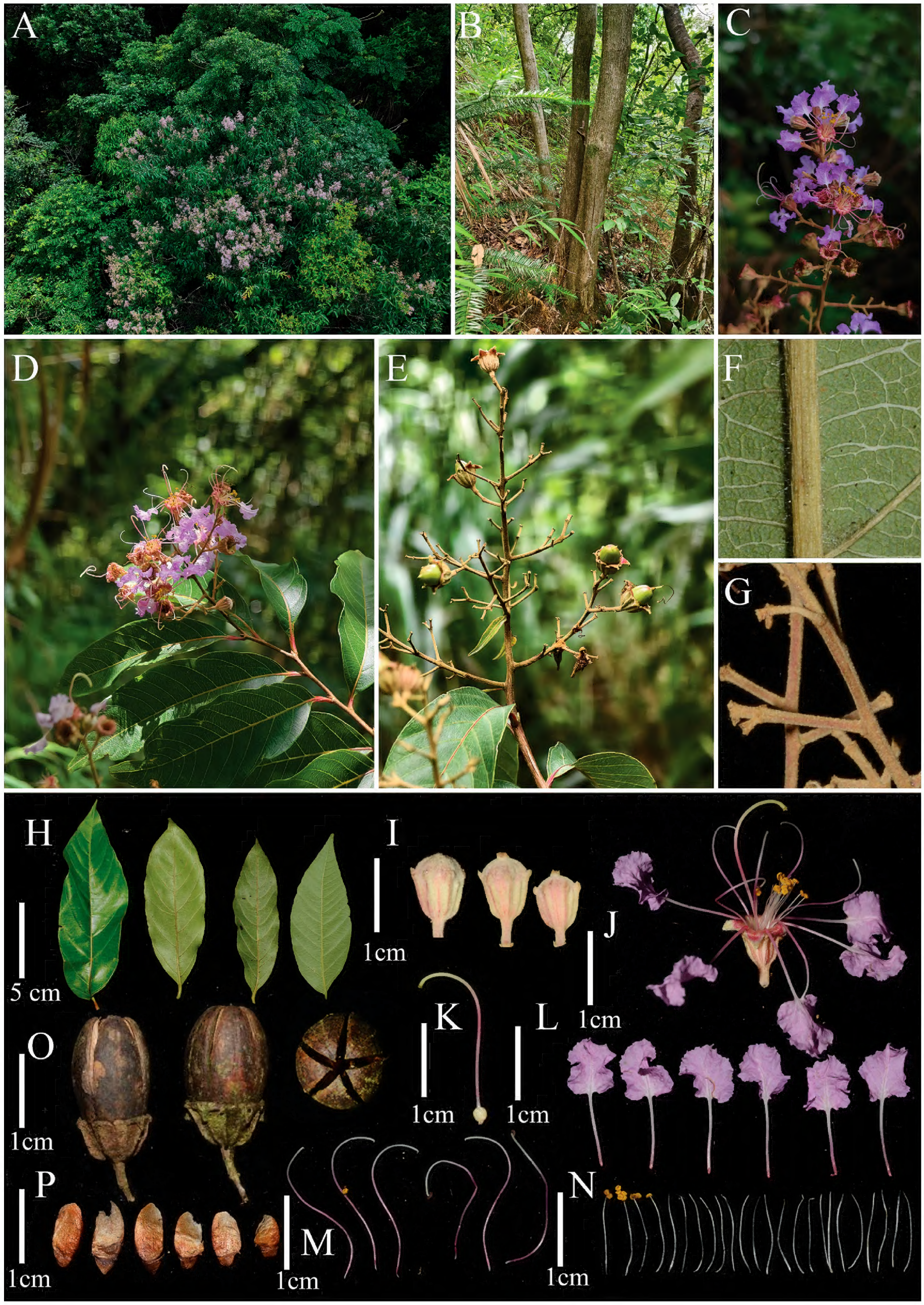

Figure 1. *Lagerstroemia yangchunensis* **A** canopy view during flowering period **B** stems **C** flowering branchlet of the inflorescence **D** flowering branch **E** fruiting branch **F** part of the abaxial leaf surface **G** floral axes **H** leaves **I** flower buds **J** flower **K** gynoecium **L** petals **M** longer stamens **N** shorter stamens **O** capsules **P** seeds. Photographed by Guo-Di Chen and Bao-Huan Wu.

Table 1. Morphological Comparison of *Lagerstroemia yangchunensis* and other similar species.

Characters	*L. yangchunensis*	*L. duperreana*	*L. speciosa*
Bark	greyish brown, thick, coarse, vertically fissured	light brown grey, thin, mottled and dimpled	light brown, black when old, coarsely vertically cracked and slightly flaking
Leaf shape	elliptic-oblong, oblong, rarely obovate	oblong, elliptic-oblong, sometimes obovate	elliptic, elliptic-oblong, or elliptic-ovate
Leaf size	10–14 cm long, 3.5–5 cm wide	8–12(–15) cm long, 3–5 (–10) cm wide	10–25 cm long, 6–12 cm wide
Leaf surface	adaxial surface glabrous, abaxial surface slightly pubescent along midvein	glabrous	glabrous
Number of lateral veins	10–15 on each side	8–10 on each side	(6–)8–14 on each side
Petiole length	4–8 mm	3–5 mm	6–15 mm
Panicle length	densely whitish tomentose	glabrous	glabrous
Flower buds	densely whitish tomentose, obovoid, 7–9 mm long, pseudopedicel 2–3 mm long	short densely whitish hairy, obovoid, ca. 6 mm long, pseudopedicel 6–12 mm long	short-farinose, subglobose, ca. 0.5 mm long, pseudopedicel 3–8 mm long
Calyx tube	6–8 mm long, distinctly 12-ridged	5–6 mm long, (indistinctly) 12-ridged	calyx tube 6–8 mm long, distinctly 12-ridged
Calyx lobe	2.5–4.3 mm long, glabrous within	ca. 3 mm long, densely whitish hairy in the upper part within	up to 8 mm long, glabrous within
Petal length	15–20 mm long, including 9–10 mm long claw	10–15 mm long, including ca. 5 mm long claw	ca. 20 mm long, including ca. 5 mm long claw

Vernacular name. The proposed Chinese name for *Lagerstroemia yangchunensis* is 阳春紫薇 (yáng chūn zǐ wēi).

Discussion. *Lagerstroemia yangchunensis* is morphologically similar to *L. duperreana*; however, it can be easily distinguished from the latter species by several characteristics, such as bark coarse and vertically fissured, calyx lobes glabrous inside and flowers with shorter pseudopedicels and petals with longer claws. A detailed comparison is summarized in Table 1.

Having large inflorescences with flowers boasting vibrant purple colors, *Lagerstroemia yangchunensis* is a potential ornamental species for urban landscaping or *Lagerstroemia* breeding. However, its restricted distribution to the edge of a managed woodland in Chunwan Town poses significant threats to its survival. The small and isolated population, coupled with interference from human activities in its habitat, makes this species highly vulnerable to extinction. To ensure the species' long-term viability and promote its sustainable development, urgent conservation measures, such as habitat protection, seed banking, ex situ cultivation, and public awareness campaigns, are necessary.

Additional specimen examined. China • Guangdong Province: Yangchun City, Chunwan Town, 22.3327°N, 112.0097°E, 205 m a.s.l., 28 Jun 2024 (fl), *B.H. Wu Lg2024141*; *ibid.*, 28 June 2023, *B.H. Wu Lg2024143*, *Lg2024144*.

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Additional information

Conflict of interest

The authors have declared that no competing interests exist.

Ethical statement

No ethical statement was reported.

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Author contributions

Bao-Huan Wu, Xiu-Ting Liu and Xing Hu are the main authors of the article, and everyone else participated in the writing. Xing Hu, Xiu-Ting Liu and Guo-Di Chen participated in the taxonomic confirmation of the new species and field investigation, and Se-Ping Dai is the leader of the research project, responsible for promoting the project.

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Data availability

All of the data that support the findings of this study are available in the main text.

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